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Applicant : Domen *et al.*
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Examiner : J. Fiorito
Docket No. : TAN-344
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APPENDIX A

1. (Canceled)

2. (Canceled)

3. (Currently amended) A method for preparation of a transition metal oxide having a micro-mesoporous structure whose average fine pore size is not less than 1nm and not more than 2nm comprising,
adding a transition metal salt, which is a precursor of a transition metal oxide and/or a metal alkoxide to a solution prepared by dissolving a polymer surfactant in an organic solvent.

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dissolving said transition metal salt in said solution, followed by hydrolyzing the transition metal salt and/or metal alkoxide, and

preparing a sol solution which is polymerized and self-assembled therefrom, and then

obtaining a framework-stabilized gel from the sol solution, and removing the polymer surfactant by using water or water to which an alkali metal or alkaline earth metal ion is added at room temperature

~~The method for preparation of transition metal oxide having micro-mesoporous structure of claim 1, wherein the process to obtain the stabilized gel contains 2nd step aging process which is carried out under the presence of oxygen gas at 60° C to 140° C for 12-48 hours on the gel obtained by gelating the sol solution to gel by aging under the presence of oxygen gas at 35° C to 60° C.~~

4. (Original) The method for preparation of transition metal oxide having micro-mesoporous structure of claim 3, wherein surface area of transition metal oxide having micro-mesoporous structure is from 100 m²/g to 500 m²/g.

5. (Canceled)

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6. (Currently amended) A method for preparation of a transition metal oxide having a micro-mesoporous structure whose average fine pore size is not less than 1nm and not more than 2nm comprising,

adding a transition metal salt, which is a precursor of a transition metal oxide and/or a metal alkoxide to a solution prepared by dissolving a polymer surfactant in an organic solvent,

dissolving said transition metal salt in said solution, followed by hydrolyzing the transition metal salt and/or metal alkoxide, and

preparing a sol solution which is polymerized and self-assembled therefrom, and then

obtaining a framework-stabilized gel from the sol solution, and removing the polymer surfactant by using water or water to which an alkali metal or alkaline earth metal ion is added at room temperature

~~The method for preparation of transition metal oxide having micro-mesoporous structure of claim 5,~~

wherein polymer surfactant is a nonionic surfactant having polyalkyleneoxide block copolymer frame

wherein the process to obtain the stabilized gel contains 2nd step aging process which is carried out under the presence of oxygen gas at 60° C to 140° C for 12-48 hours on the gel obtained by gelating the sol solution to gel by aging under the presence of oxygen gas at 35° C to 60° C.

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7. (Original) The method for preparation of transition metal oxide having mesoporous structure of claim 6, wherein surface area of transition metal oxide having micro-mesoporous structure is from 100 m²/g to 500 m²/g.